REMARKS

Claims 1-4, 6-8, 11-13, 15-21 and 23 are pending.

Claims 1, 7, 11 and 16 have been amended herein and are fully supported in the specification. The specification has been amended herein. No new matter has been added to the specification as a result of these amendments.

Objection to the Specification

The Specification of Applicant's present application is objected to for a lack of clarity in the paragraph linking pages 13 and 14. The objection is cured herein by the submission of the amended paragraph, Page 13, Line 21 – Page 14, line 4, which is amended per Examiner's suggestion. Applicant respectfully requests removal of the objection.

35 U.S.C. §112

Claims 1-4, 6-8 and 11-13 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 has been amended in accordance with the Examiner's suggestion. The Specification, paragraph at Page 11, lines 1 – 19, has also been amended herein in order to more clearly show the basis for the "band-gap reference circuit, comprising: a band-gap reference unit; a buffer circuit electronically coupled with said band-gap reference unit; and a voltage pull-up device electronically coupled between said band-gap reference unit and said buffer circuit," as recited in Claim 1. Claims 2-4 and 6 depend from Claim 1 and recite further limitations.

Claim 7 has been amended in accordance with the Examiner's remarks. Claim 7 recites "an electronic device comprising a silicon substrate, electronic circuitry constructed in said silicon substrate, and a band-gap reference circuit electronically coupled in said electronic device." Applicant respectfully submits that Claim 7 particularly points out distinctly claims Applicant's invention. Claims 8 and 11-13 depend from Claim 7 and recite further limitations. For these reasons, Applicant respectfully submits that Claims 1-4, 6-8 and 11-13 satisfy 35 U.S.C. §112, second paragraph.

35 U.S.C. §103

Claims 1-4, 6-8, 11-13, 15-21 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kadanka et al. (U.S. Patent No. 5,621,308) in view of newly cited art to Mietus (U.S. Patent No. 5,666,046). Applicants have reviewed the recited references and respectfully submit that the present invention, as is recited in Claims 1-4, 6-8, 11-13, 15-21 and 23, is neither anticipated nor rendered obvious by Kadanka and Mietus, either alone or in combination.

Claim 1 of the present invention recites a "band-gap reference circuit, comprising a band-gap reference unit, a buffer circuit electronically coupled with said band-gap reference unit; and a voltage pull-up device electronically coupled between said band-gap reference unit and said buffer circuit." Neither Kadanka et al nor Mietus, whether alone or in combination, show a "voltage pull-up device electronically coupled between said band-gap reference unit and said buffer circuit," as recited in Claim 1.

Claim 7 of the present application recites "an electronic device" comprising "a band-gap reference circuit, comprising a band-gap reference unit, a buffer circuit and a voltage pull-up device" "wherein said voltage pull-up device is coupled between said band-gap reference unit and said buffer circuit." As stated above, neither Kadanka et al nor Mietus, whether alone or in combination, show a "voltage pull-up device electronically coupled between said band-gap reference unit and said buffer circuit," as recited in Claim 7.

Claim 16 of the present application recites "a method for providing a reference voltage, comprising flowing current through an electronic element such that the band-gap voltage of said electronic element provides said reference voltage, providing a buffer circuit coupled to a band gap voltage reference unit, and adjusting the voltage across said buffer circuit by use of a voltage pull-up device coupled between said buffer circuit and said band gap voltage unit, so that said band-gap reference voltage is maintained, wherein said voltage across said buffer circuit is a V_{BE} of less than 1.0 volts." As discussed above, neither Kadanka et al nor Mietus, whether alone or in combination, show a "voltage pull-up device electronically coupled between said band-gap reference unit and said buffer circuit," as recited in Claim 16.

Claims 2–4, 6, 8, 11–13, 15, 17-21 and 23 depend from, and recite further limitations to, independent claims which are, as amended, in condition for allowance. As such, they are allowable limitations on those claims and the rejections of record are respectfully traversed.

CONCLUSION

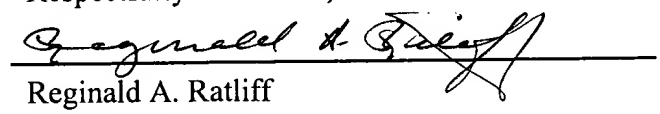
Claims 1-4, 6-8, 11-13, 15-21 and 23 are pending. Claims 1-7, 11, 16 and 21 have been amended herein.

In light of the foregoing amendments and remarks, Applicant respectfully submits that the remaining claims are in condition for allowance. Applicant respectfully requests allowance of the pending Claims.

The Examiner is invited to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Date: 2/9/04

Respectfully submitted,



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